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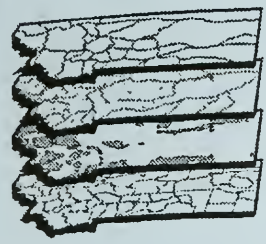

MONTANA GIS NEWS

Eighth Annual GIS Conference:
Sharing Information - From Local to Global

The Eighth Annual Montana GIS Users' Group Conference is almost upon us. This year's conference promises to continue the tradition of thought provoking and informative workshops, plenary sessions, and paper presentations. The conference is at the Holiday Inn in Missoula. Workshops will be on April 1, the full conference will be April 2 and 3. For full conference details see the **preliminary** conference program attached to the newsletter.

Plenary Presentations
The welcoming and keynote will be by **Nancy Tosta**. Nancy is nationally recognized as an innovative thinker and leader on a wide range of GIS issues. The impressive and rapid development of the National Spatial Data Infrastructure is largely a result of Nancy's vision and leadership. Nancy is known for her informative and enlightening speaking style. Her presentation will be one you won't want to miss. **Daniel Kemmis**, will also be presenting a plenary talk on Tuesday morning. Mr. Kemmis will address "How GIS Fits into Community Involvement in the Political Process." The Mayor of Missoula, and former speaker of the Montana House of Representatives, Mr Kemmis is well known for his books, *Community and The Politics of Place*, and *The Good City and the Good Life*. Recognized by Utne Reader in 1995 as one of its "100 Visionaries," Mr Kemmis will challenge you to look at yourself and your place in the community in new ways.

On Wednesday morning **Dr. William Huxold** will conduct a plenary session on "Implementing GIS in the Urban Landscape." Dr Huxold, a full professor at the University of Wisconsin -- Milwaukee, is very well known and respected in the Urban GIS community. Notable publications include *Managing Geographic Information Systems Projects*, (with Allan Levinsohn), and *An Introduction To Urban Geographic*
(Continued on Page 3)

GIS in Education:
Report from the GIS Users' Group School Subcommittee

Since its formation in 1994, the school subcommittee has been actively promoting the use of GIS in Education. The group's efforts encompass expanding Public Night to include kid's activities, working with teachers on GIS projects in their classrooms, establishing endowed scholarships at both of the major universities in Montana, and developing a GIS Resource Box for teachers.

Public Night has been a part of the Users' Group Conference since 1991. It's an opportunity for the public to learn about GIS, see GIS projects in Montana, and meet GIS professionals in an informal setting. At the 1995 Conference in Helena, a special effort was made to include the K-12 crowd in Public Night. Activity booths were set up and prizes awarded for those that completed activities. It was a great success, and generated enthusiasm for more GIS involvement at the K-12 level. In addition to the activities booths this year's Public Night will be expanded to include highlights of GIS projects from several Missoula area schools. Allan Cox and Stephen Holloway will make a special presentation to teachers and lay people to explain the concepts behind GIS. A video of student projects will be available throughout the night, and students as well as GIS professionals will be around to answer questions about their projects. Public Night will be held on April 1, from 6:30 - 9:00 pm, at the Holiday Inn in Missoula. *(Continued on Page 3)*

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STATEWIDE GIS COORDINATION AND YOU

by: Cathy Maynard, US Forest Service, Chair - Montana GIS Technical Working Group

As a relative newcomer to the Montana GIS community, the past few years have offered me many opportunities to develop a perspective of how GIS is being implemented and coordinated in our neck of the woods. From the project driven, single agency view to the more generalized multi-user, administrative concerns, the topic has as many angles as there are clouds in the Big Sky. Whatever your viewpoint, the issues surrounding coordination are important enough to deserve our collective attention and creative efforts to resolve.

As a member of the ITAC (Information Technology Advisory Council) GIS task force for the past few months, the acting Chairperson of the GIS Technical Working Group (TWG), and in real life the project manager of a multistate GIS mapping effort; I have recently observed and participated in countless discussions regarding the future of GIS coordination efforts for the State. Unfortunatley, some of these discussions have even deteriorated into arguments. It appears that the growing number of GIS users and the proliferation of systems and applications has the potential to polarize and divide the GIS community as competition for support (financial/technical) increases and divergent priorities evolve. I would like to suggest that the surest way to prevent this from happening is for each of us to take on the additional responsibility of getting involved on a day-to-day basis in the nuts and bolts of coordination. For those working in Federal agencies, this can mean learning who the lead agencies are for common data themes (ie. transportation, hydrography, ownership etc.) and forming cooperatives with them as you work on/with this data, it could also be as simple as requesting the functionality to electronically transfer files using mechanisms that are common among other users. For those in State agencies this may mean lobbying for the designation of lead agencies to assume responsibility for common statewide themes, and following through to see that useful products are developed. For local or county users it may mean voicing the need for statewide geodetic control points and working to establish them. For all of us, looking for common needs and practical means to meet them is essential. Focusing only on our differences will not provide administrators and decisionmakers with the information required to make wise choices in our behalf.

Regardless of how coordinating organizations evolve over the next few years through expanding the membership of the TWG and representation on the Steering Committee, or through new and different alliances, the power to make these groups work is still up to each of us. By taking an active role in requesting qualified representatives, by communicating with those representatives and arming them with the facts they need to accurately represent our concerns, we can make use of coordinating entities while not being trapped into viewing them only as bureaucratic boondoggles. Only by looking for opportunities to work collectively and following up with decisive actions can a future of productive and coordinated GIS activities in Montana be assured.

Those attending this years Montana GIS Users conference will be the first in the country to learn about the latest use for GIS - SPATIAL ALE!!!!!

(GIS in Education continued from page 1)
At the 1995 conference, the Users' Group voted to establish scholarships at Montana State University (MSU) and the University of Montana (UM). Funds for the endowment were allocated from the Users' Group account after paying for the conference and newsletter. After the 1995 conference a bank account was opened for the endowments with the with an initial balance of almost $2500. Each endowment will be established at $10,000, this will allow an annual $500 scholarship to be granted in perpetuity. By virtue of a coin toss, the Board determined that MSU would be the first university to receive an endowment. The goal is to have both endowments in place by 2000. To achieve this goal the school subcommittee will actively engage in fund raising at the 1996 conference. Conference T-shirts will be sold, several items will be raffled, and corporate and individual donations will be solicited. So bring your wallet to Missoula and support GIS in Montana schools!

Another goal of the school subcommittee is to put together both a physical and virtual GIS Resource Box. The idea is to package GIS software, tools, and lesson plans that could travel from school to school. A homepage is already in the works which has links to GIS freeware, data, and exercises for K-12 kids. Check it out at *http://nris.msl.mt.gov/k-12/resourc.html.*

For more information about the annual GIS Users' Group Conference, Public Night, or the school subcommittee, contact Ken Wall via email at kwall@selway.umt.edu or call 406-243-4347. The web site is at *http://www.forestry.umt.edu/mtgis.* We look forward to seeing you in April!

(1996 GIS Conference continued from page 1)
Information Systems. Following Dr. Huxold, **John Steffenson**, Federal Program Manager for Environmental Systems Research Institute, Inc. (ESRI) in Boulder, Colorado, will present a plenary session on "Trends in Spatial Information Technology: What's Hot, What's Not". With over 15 years of GIS experience, Mr. Steffenson has significant insight into the technical, organizational, and political trends that will shape the future of GIS development.

Other Conference Highlights

Many other exciting and important presentations are scheduled. Three panel discussions will be presented. On Monday we will have panels on national GIS directions - *FGDC Panel Discussion*, and local government issues - *Local Government Coalition & Parcel and Address Mapping*, and on Wednesday we have a panel on data sharing - *Share MY Data?* on Monday night will feature Public Night. Public Night has grown over the years to become one of the more exciting conference components as more and more Montanans become aware of the impact and importance of GIS in their lives. Public Night will focus on education topics this year (see the article on page 1 for more information on GIS in education). This year's social will be on Tuesday night and include live music by "Grass Valley String Band." As always we will have a wide spectrum of local and national GIS vendors, great paper presentations, interesting posters, and everyone who's anyone in the Montana GIS community. Hope to see you there!!

Making the Right Decision at the Right Scale, Resolution and Extent

by Michael Sweet and Ken Wall, School of Forestry, University of Montana

The Bitterroot Ecosystem Management Research Project (BEMRP) is a five-year partnership between the USDA Intermountain Research Station, USFS Bitterroot National Forest, and The University of Montana. The primary project objective is to assess how human activities have altered ecosystems in the north Bitterroot Mountain Range, and evaluate restoration opportunities. BEMRP is an interdisciplinary effort attempting to blend ecosystem-based research and land management principles with the social and economic needs of people. With the oversight of an interdisciplinary core team, four research groups target the following specific focus areas -- fauna, vegetation, human dimension, and landscape analysis.

The Landscape Analysis and Application Group is testing procedures for assessing and evaluating landscapes at varying scales over time. Integrating spatial and temporal modeling with GIS is key to the success of this assessment and evaluation process. GIS places observable phenomenon and physical attributes in their proper spatial context, enhances the reasoning process and the process of conveying results to others. GIS provides an environment for analyzing spatial data and plays an important role in preparing input to the modeling systems. The simple fact that GIS provides information on adjacency and relates features from different themes enhances the success of the landscape assessment and evaluation effort.

A key component of the assessment and evaluation process is determining the appropriate question to ask and what scale and resolution of geographic data is appropriate for answering that question. A number of projects begin by developing a geographic database at a specific scale and resolution in the hopes of answering a range of questions. Given a geographic database is in place, then it is less clear what subset of questions are effectively addressed at the given scale and resolution. Within the context of ecosystem assessment and management, the Landscape Analysis and Application Group within BEMRP is attempting to determine the effect of scale, resolution and extent on the decision process. Tying the question to it's proper scale, resolution and extent is key to developing and designing the proper geographic database to answer that question.

Montana Local Government GIS Coalition Panel to be Presented at Conference

The Montana Local Government GIS Coalition was formed during the summer of 1995 and has been active in several initiatives since that time. Some of these initiatives are on-going and welcome more discussion. This panel will discuss the following issues and developments and any other topics the audience may wish to add if time permits:

- Recent development of a traveling GIS technical demonstration which is available for presentation to interested parties.
- A workshop to be conducted at various regional sites to provide hands-on experience and training in documenting data in accordance with FGDC standards.
- An update on the status of ITAC appointed GIS Task Forece and their proposed recommendations for GIS development in Montana.
- An update on research being conducted on funding sources for Montana's Local Governments.
- A legislative proposal being formulated by the Local Government Coalition, the Department of Revenue, the Montana State Local Government Center, and the Geographic Information and Analysis Center (MSU) to develop and begin to implement a strategy for creating a statewide parcel coverage.
- An open discussion on future direction of the Coalition is also welcome. The Panel will be Tuesday, April 2, at 11:00 am.

The Montana Local Government GIS Coalition (MLGGC)
The Geographic Information and Analysis Center (GIAC)
&
The Local Government Center (LGC)
invite you to

A National Satellite Program Entitled:
Implementing LIS in Local Government: Issues and Interfaces

April 11, 1996
11:30 - 5:00 PM
Conference Room 148
Visual Communications Building

The satellite videoconference will help local governments examine current uses and explore options for expanding and updating existing GIS services. Speakers will address concerns in the meshing of national efforts with local needs.

Conference Format

The first part of the videoconference provides a primer for local elected and appointed officials who oversee GIS programs. These people are essential to creating the interfaces between offices, disciplines and people to make GIS/LIS work. Interviews will highlight how several Wisconsin communities are networking to foster GIS/LIS implementation.

The second part of the program will focus on technical aspects of implementation. Participants will learn strategies and alternative approaches to deal with issues such as georeferencing systems, basemapping and image development, street addressing and urban considerations.

Who Should Attend

The satellite videoconference is appropriate for anyone involved in the implementation of GIS/LIS in local government, including land use and land records professionals, elected and appointed officials, utilities and facilities managers, directors of information management and GIS specialists and technicians.

Preliminary Schedule

8th Annual Montana GIS User's Group Conference

Mon., April 1	All Day- Registration 7 a.m. to 8 p.m.			
8:00 am - noon	*MTGIS Pre-conference workshops*			
noon - 1:00 pm	Lunch Break			
1:00 - 5:00 pm	*MTGIS Pre-Conference workshops*			
5:00 - 6:30 pm	Dinner Break			
6:30 - 9:00 pm	*PUBLIC Night * Free and open to the Public* --GIS and Education --Geographic Projects in the Schools -- GIS Activity Center -- Vendor Presentations --			
Tue., April 2	Morning Session- Registration 7 am to 7 pm			
8:00 - 8:15 am	*Welcome - Stu Kirkpatrick, President of the Montana GIS Users' Group*			
8:15 - 9:00 am	*Keynote speaker: Daniel Kemmis, Mayor of Missoula*			
9:00 - 9:45 am	*Keynote speaker: Nancy Tosta, USGS* *"The Federal Perspective On The Future Of GIS Data in the U.S."*			
9:45 - 10:30 am	*FGDC Panel Discussion*			
10:30 - 11:00 am	Break and Temporal Adjustment (Vendors open)			
	Track 1 - Natural Resources	Track 2 - Local Government	Track 3 - Special Topics	Track 4 - Special Topics
11:00 - 11:30 am	Topographic Modeling of Habitat	Panel: Local Government Coalition & Parcel and Address Mapping	Salish & Kootenai Tribes	Setting Up a NSDI Node
11:30 - noon	Wildlife-Habitat Relationships		Mineral Resource - Fort Peck	Electronic Data Atlas
noon - 12:30	To be Announced		The BIA GIS Center	Repositories for Spatial Data Sets
12:30 - 1:30 pm	Lunch Break			
Tue., April 2	Afternoon Session			
	Track 1 - Natural Resources	Track 2 - Local Government	Track 3 - Special Topics	Track 4 - Special Topics
1:30 - 2:00 pm	Grizzlies in Yellowstone	Hydrogeologic Mapping w/GIS	GIS-based Habitat Suitability	Data Mngmt- Object-oriented
2:00 - 2:30 pm	Salmon-Selway Ecosystem	Missoula Septic System	Electronic Data Atlas	NASA to Planet Earth
2:30 - 3:00 pm	To be announced	Unsewered Areas Study	Barriers to GIS use-Canada	Status of USGS Products
3:00 - 3:30 pm	Break and Temporal Adjustment			
	Track 1 - Natural Resources	Track 2 - Local Government	Track 3 - Special Topics	Track 4 - Special Topics
3:30 - 4:00 pm	Sun River Ecological History	GIS & Wildland/Urban Interface	Compare Anusplin & PRISM	GPS- Creating County Rd Layer
4:00 - 4:30 pm	Riparian Mapping Upper Clark Fork	Fire Risk Rating - Whitefish	Watershed Boundaries in a GIS	Criterion Survey Laser- GIS
4:30 - 5:00 pm	Distance-based Paths & Territories	Real-Time Emerg. Assist (REACT)	Creating Regional Elev. Model	To be announced
5:00 - 6:30 pm	***Vendor Show, Facility Tours, No-host Social*** ***--MLGGC/MACITA Meeting--***			
6:30 - 9:00 pm	***Conference Dinner, Poster Session Entertainment by "Grass Valley String Band", Vendor Sessions and more!***			

Wed., April 3	Morning Session			
8:00 - 8:45 am	***Keynote speaker: Bill Huxold*** ***"Implementing GIS in the Urban Landscape"***			
8:45 - 9:30 am	***Keynote speaker: John Steffenson, ESRI*** ***"Trends in Spatial Information Technology: What's Hot, What's Not"***			
9:30 - 10:00 am	Break and Temporal Adjustment			
	Track 1 - Natural Resource	Track 2 - Local Government	Track 3 - Local Government	Track 4 - special topics
10:00 - 10:30 am	Aerial Photos & Landsat TM Image	GIS and Urban Forestry	Career Services/Placement - GIS	GIS and User Interface
10:30 - 11:00 am	Vegetation Class. Colville NF	Butte- Lead Poisoning Prevent.	Disability & Rehab issues	The Region Data Model
11:00 - 11:30 am	Analysis Watershed- Swan Valley	Garbage in, Garbage out	To be announced	Generating Flowlines
11:30 - 1:00 pm	***MTGIS Business Meeting and Lunch*** --Users' Group Annual Report-- --Education subcommittee Report-- --Technical Working Group Report (TWG)-- --Montana Local Government GIS Coalition Report (MLGGC)-- --Montana Information Technology Advisory Committee Presentation--			
Wed., April 3	Afternoon Session			
		Regional Planning	GIS and Education	
1:00 - 1:30 pm	To be announced	Social DB: CAMAS Rural Planning	GIS Education through the WEB	
1:30 - 2:00 pm	To be announced	Public/Pri. Partnership-Ravalli Co.	The Ethics of GIS Mapping	
	Short Break			
2:00 - 3:30 pm	Wrap up -- Speaker to be announced			
3:45 - 5:00 pm	Facility Tours			

PROGRAM SUBJECT TO CHANGE!!!

FOR MORE INFORMATION SEE WWW HOMEPAGE: http://150.131.101.6/mtgis/
OR CONTACT KEN WALL: kwall@selway.umt.edu

Montana Statewide Basemap Layer Status

LAYER	RESPONSIBLE AGENCY	STATUS
TRANSPORTATION	USGS/DOT	100k DLGs available for the entire state, DOT data available for the State - non topological
UTILITIES	DEQ	Major transmission lines available for the state
TOPOGRAPHY*	USGS/USFS	7.5 and 15 meter DEM complete forapproximately 75% of state. Much is available from NRIS. Completion currently being pursued by ITWG. 3 arc second data complete for entire state - available from NRIS.
HYDROGRAPHY*	USGS/NRIS/FWP/UM-GAP	DLG files for entire state complete. Available from NRIS. Montana River Reach database is complete. UM GAP project is making extensive edits to DLGs to correct errors for western half of Montana.
USPLS*	UM/NRIS/BLM	1:100,000 currently in progress by BLM. Schedule completion for entire state is March 1996. 1:24,000 complete for most of state - needs organizing and attributing - available from NRIS.
GEOGRAPHIC NAMES	USGS	GNIS files for entire state complete. Available from NRIS.
BOUNDARIES	USGS	Some available in Census files.
GENERALIZED OWNERSHIP*	BLM	Cooperative project currently under way. Scheduled for completion March 1996.
CENSUS GEOGRAPHY	Census Bureau	Entire state complete. Available from NRIS.
SOILS*	Natural Resource Conservation Service (NRCS)	1:250,000 STATSGO complete for entire state, not certified by SCS yet. Available from NRIS. 12% of state complete at 1:24,000.
LAND USE	USGS	1:250,000 complete for state. Available from NRIS.
VEGETATION*	GAP Project/UM	Classification of Landsat Thematic Mapper images currently in progress. Scheduled completion date April 1996.
GEOLOGY*	Montana Bureau of Mines and Geology	In progress

The Montana GIS Interagency Technical Working Group (TWG) has identified the 13 layers listed above as the most important for GIS users in Montana. Layers identified with an asterisk (*) are currently in progress.

If you are interested in more detail about one or more of the layers listed above call Pam Smith @ 406-444-5354 and she can put you in contact with the TWG representative responsible for the layer.

If you would like to participate in the planning or development of statewide basemap layers or other collaborative GIS projects you may do so by participating in the TWG. Contact Pam Smith at the number above for meeting dates and more information.

GIS CONFERENCES

March 25-28, Mapping from Aerial Photographs, Corvallis, OR, Contact: 303-337-0513.
March 25-29, 26th International Symposium on Remote Sensing of Environment and 18th Annual Symposium of the Canadian Remote Sensing Society, Vancouver, British Columbia, CA Contact: E-Mail: symposium@mda.ca
April 1-3, Eighth Annual Montana GIS Conference, Missoula, MT, Contact: 406-243-5521.
April 9-13, Annual Meeting of the Association of American Geographers (AAG), Charlotte, N.C. Contact: 202-234-1450.
April 11, Land Information Systems for Local Government: Issues and Interfaces, Madison WI, Contact: 608-263-5534.
April 13-17, 1996 Natural Planning Conference of the American Planning Association. Orlando FL, Contact: 312-431-9100.
April 15-18, '96 FHWA-AASHTO National Metric Conference, Fort Collins, CO, Contact: 970-491-7425.
April 26-28, GeoInformatics '96: GIS/Remote Sensing Research, Development and Applications, West Palm Beach, FL, Contact: 305-284-4087.
April 28 - May 1, 1996 MidAmerica GIS Symposium, Kansas City, MO, Contact: 913-764-8484.
May 13-15, ADL '96 Forum: Forum on Research and Technology Advances in Digital Libraries, Contact: 201-648-5239.
May 21-23, Second International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences, Fort Collins, CO, 970-498-1100.
May 27-31, Fundamentals of GIS and Image Processing Training, Worcester, MA, Contact: 508-793-7526.
May 28-31, Fifth Annual Business Geographics Conference and Exposition. Chicago, IL, 970-223-4848.
June 3, 1996 GPS Conference, Minneapolis, MN, Contact: 612-374-5800.
June 8-12, Watershed '96: Moving Ahead Together, Baltimore, MD, Contact: 703-684-2400.
June 11-13, NECC '96: 17th Annual National Educational Computing Conference, Minneapolis, MN, 541-346-2834.
June 17-20, International Engineering Document Management Exposition and Conference, Anaheim, CA, Contact: 800-451-1196.
June 22-28, Sixth International GPS/GIS Conference, Billings, MT, Contact: 406-248-6771.
July 27 - Aug 1, URISA '96, Salt Lake City, UT, Contact: 202-289-1685.
July 28 - Aug 1, Partners in Information Technology for Peak Performance, Salt Lake City, UT, Contact: 202-289-1685.
September 22-25, Third Annual Geographic Technology in Government Conference, Exposition and DataMart, Arlington, VA, Contact: 970-223-4848.
November 21-22, GIS/LIS '96, Denver, CO, Contact: 301-493-0200.

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